

REMARKS

Reconsideration of the present application is respectfully requested. Applicant has amended and added claims to more clearly define what the Applicant regards as their invention. Support for the additions is found in the specification, the drawings, and in the claims as originally filed. Claims 1-17, 27-31 are pending. Claim 1 is amended. Claims 27-29 are new. No new matter has been added.

Claim Rejections - 35 U.S.C. § 102

The Examiner has rejected claims 1-4, 7-11, 13 and 15-17 under 35 USC 102,(b) as unpatentable over Nogami et al. (U.S. Patent No. 6,022,808). The Examiner has rejected claims 1-9 and 11-17 under 35 USC 102,(e) as unpatentable over Lopatin et al. (U.S. Patent No.6,624,075). The Applicant respectfully traverses.

Claims 1-9, 13-17

In claim 1, as amended, Applicant claims a method of forming a conductive path of a first material and depositing a second material "*that does not comprise the first material*" on the conductive path. The amendment clarifies that Applicant's second material is comprised of constituents other than those of the first material. In contrast, it is Applicant's understanding that Nogami discloses only that a "doped *layer of Cu* is deposited *on the undoped Cu layer*" (Col 5, ln 20-24, Col 5, ln 64, Col 4, ln 25). Therefore, Nogami discloses depositing a second material, copper (Cu), which comprises the first material, copper (Cu). Similarly, Applicant also understands Lopatin to disclose only a method of "doping the Cu

surface with Zn from an interim *copper-zinc (Cu-Zn) alloy electroplated on the Cu surface*” (Col 2, ln 33-37). Here again, the reference is teaching depositing a second material, copper-zinc (Cu-Zn) which comprises the first material, copper (Cu). Because both references require the first and second materials to comprise copper (Cu), the cited references fail to teach or suggest a second material “*that does not comprise the first material,*” as required by Applicant’s amended claim 1. This amendment has original support by Applicant’s embodiment where the first material is copper and the second material does not contain copper (Applicant’s paragraphs [0033] and [0034]). Accordingly, Applicant has amended Claim 1 to delineate this distinction more clearly and as such, claim 1 is not anticipated by either Nogami or Lopatin. On this basis, Applicant respectfully requests removal of the 35 U.S.C. 102 rejection of independent claim 1 as well as dependent claims 2-9, 13-17.

Claims 10-12

Claim 11 has been amended into independent form. Applicant claims in 11 a method with “deposition of a second material on the conductive path *subsequent to planarizing* the substrate having the conductive path” (Applicant’s Fig. 1a-1c). In contrast, Nogami requires polishing back or planarizing the substrate *after* the deposition of the second material (Fig. 3, Col 4, ln 33-35, Col 6, ln 5-8). Similarly, Lopatin also discloses that planarization must occur *after* the second material is deposited (Fig. 2,3, Col 3, ln 31, Fig. 2,3). Therefore, the Nogami and Lopatin references do not anticipate Applicant’s method as claimed in 11. Applicant respectfully requests removal of the 35 U.S.C 102 rejection for claim 11 as well as dependent claims 10 and 12.

Claims 27-29

Applicant has added new independent claim 27 with dependent claims 28 and 29 to more clearly claim the method requiring an oxide removal operation as taught by Applicant (Applicant's paragraph [0031]). Lopatin fails to disclose *removing* an oxide from the conductive path *prior* to depositing the second material. Rather, Lopatin merely discloses *annealing* both the first and second materials in an oxygen-free environment *after* depositing the second material (col 2, lines 50-55). Nogami also fails to disclose a removal of oxide from the conductive path *prior* to depositing the second material. Since neither Lopatin nor Nogami disclose the oxide removal operation of Applicant's method, the references do not anticipate Applicant's method claimed in 27.

Applicant respectfully submits that the present application as amended is now in condition for allowance.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

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